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APPLICATION NO.	FILING DATE	FIRST-NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,426	07/06/2001	Andrew Daiber	NUFO002	4971

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07/14/2003

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EXAMINER

VY, HUNG T

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,426

Applicant(s)

DAIBER ET AL.

Examiner

Hung T Vy

Art Unit

2828

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/18/2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


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TECHNOLOGY CENTER 2800

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s) 10
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

1. In response to the amendment filed on 06/18/2003, claims 31-54 are pending in this application as a result of the addition of claims 31-54 and the cancellation of claims 1-30.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 31-54 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 31, the claim is confusing, vague, and indefinite. The claim does not have limitation to do the function to perform step process. The claim is not clear that the claim is process step or perform step by device.

Regarding claims 43 and 52, the claims are confusing, vague, and indefinite. The claims recite a gain medium to emit an optical beam. A gain medium without the recitation of any active medium or a laser device fails to emit an optical beam. A gain medium cannot emit the laser light because the crystal cannot do anything to emit the light. The claims fail to recite the structure to form the cavity because the gain medium and a reflector can not form the cavity, the cavity have been formed by two reflectors or

Art Unit: 2828

mirror. Further, the claims fail to recite any structure in order to adjust the nominal operating setting in response to the voltage change to tune the optical element. How can the optical element, control system to adjust the nominal operating.

Claims 32-42, 44-51 and 53-54 depend from rejected claim 31, 43 and 52 thereby render these dependent claims indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 31-49, 52-54 are rejected under 35 U. S. C. § 102 (b) as being anticipated by Hester et al., U.S. patent No. 5,251,222.

Regarding claims 43, 49 and 52-54 Hester et al. discloses a laser apparatus, comprising: a gain medium (18) to emit an optical beam along an optical path; a reflector (16) positioned in the optical path and defining a laser cavity (See fig 1); a voltage sensor operatively coupled to the gain medium (18) (See fig. 5) to monitor voltage across the gain medium (see column 8, line 12-19); and a control system operatively coupled to the voltage sensor and to an optical element positioned in the optical path, the control system (42) to deviate a nominal operating setting of the optical element to induce a voltage change across the gain medium (18) and to adjust the

Art Unit: 2828

nominal operating setting in response to the voltage change to tune the optical element (see fig. 5, 1 and column 8, line 20-38).

Regarding claims 44-48, Hester et al. discloses the laser apparatus wherein the control system further to dither (28, 36) the nominal operating setting to induce a modulated voltage across the gain medium (18) and to adjust the nominal operating setting in response to the modulated voltage to tune the optical element (see fig. 5), a dither element to dither the nominal operating setting of the optical element (36); and an adjustment element (36) to adjust the nominal operating setting of the optical element (See column 6, line 31-68 and column 7, line 1-18 as optical element (36) can change the length cavity).

With respect to claims 31-42, the methods for operating a laser are considered as product by process steps.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 50-51 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Hester et al., U.S. patent No. 5,251,222 in view of Flanders, U.S. Patent No. 6,366,592.

Art Unit: 2828

Regarding claim 50-51, Hester et al. disclose all limitation of the laser apparatus except for the optical element comprises one of a grid generator, a channel selector, and an electro-optic tuning element, and a nominal temperature of the optical element. However, Flanders discloses the optical element comprises one of a grid generator (714, 716), a channel selector (354), and an electro-optic tuning element (410), and a nominal temperature of the optical element (See column 3, line 57-65 and Fig. 10).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Hester et al. to have grid generator, tuning element as taught by Flanders because those skilled in the art will recognize that such modification and variations can be made without departing from the spirit of the invention.

Citation of Pertinent References

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patent to Burke et al. disclose Multi-stable Cavity Procesor, U.S. Patent No. 5,245,626.

Response to Arguments

6. Applicant's arguments with respect to claims 31-54 have been considered but are moot in view of the new ground(s) of rejection.


Art Unit: 2828

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vy whose telephone number is (703) 605-0759. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul IP can be reached on (703) 308-3098. The fax numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


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TECHNOLOGY CENTER 2800

Application/Control Number: 09/900,426

Page 7

Art Unit: 2828

Hung T. Vy

Art Unit 2828

June 26, 2003